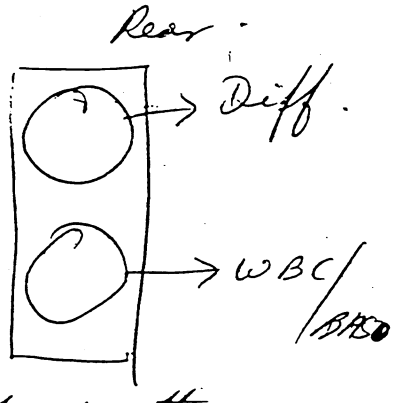
SF-3000 PM PROCEDURE

Recommended items to have available

Description	Part no.	Qty.
Latex calibrator	911-0561-1	1
Latex Plt calibrator	911-0571-8	1
Tube Pharmed 1/32x5/32	442-5786-8	1M
Rubber packing #43	368-2404-6	1
Piston ring A01B008440	443-6841-7	2
Piercer no. 3	971-0591-5	1
Cubitainer spout kit	943-1781-1	1
Hand clipper no. 17	367-1982-3	2
Rubber plate no. 39	368-0079-6	1
Drill bit .8mm	N/A	1
Valve Seal 2 port	443-8676-3	2
Valve Seal 3 port	443-8665-2	2

Supplies required

Distilled water
Bleach
10 ml syringe (for flow cell cleaning)



PROCEDURE

1. Review any problems with customer

2. Run latex calibrator (911-0561-1) and record the following values (for later comparison)

WBC/BASO-X(W)
WBC/BASO-Y(W)
DIFF-Y(W)

3. Clean the following:-

A. Vacuum orifice

B. Waste nipple

C. Waste tubing to external drain

D. Tubing from waste nipple back to waste chambers and associated T connectors

E. Waste chambers including float switches and nipples on top of waste chambers.

F. Remove covers from MV16 and 18 - check for blockages and clean

G. Clean or replace associated tubing (check T connector) on top of MV16 and 18

H. Visually inspect for any other signs of build up and clean as needed. (note:- It is very important that MV16,MV18 and associated tubings are clean, to prevent flow cell blockages or incorrect diff flags)

I. Clean flow cell manually as per attached procedure

J. Perform "WBC flow cell bubble removal" x2 _made - Test88.

K. Clean SRV as per operators manual 5-21

L. Clean SRV tray and rinse cup

4. Sampler maintenance (see section 7 of SF service manual)

A.Clean needles and wash block and replace rubber packing if required

B. Adjust/replace hand clippers as needed

C. Clean rack pool assembly, including base and sensors

D. Clean and lubricate rack position sensors

E. Check for free movement of racks through measurement line

F. Reassemble piercer assembly and check tube pickup and piercing position

G. Check state of all rack inserts if used, and make sure they hold tubes firmly (worn inserts should be discarded as they can cause needle crashes)

5. Check condition of reagent tubing, spout assemblies and tightness of nipples on rear of SF-3000

6A. Inspect RBC transducer for leaking or other problems

B. Perform RBC aperture clog removal followed by "clean RBC transducer" sequence

C. Inspect HGB flow cell for spillage, leaks or other problems

7. Verify SRV alignment using a .8mm drill

8. Check charge line pinch valves and replace if worn

9. Reset relevant maintenance counters (maintenance/more/service data/back arrow key)

10. Remove vacuum line from rear of SF-3000 and flush water into it (to compressor trap.) Empty trap and repeat until water runs clear, leaving no water in trap.

11. Clean vacuum bellows tank and pin

12A. Check compressor pressure is reading 2.2kg/cm2 Adjust as needed.

B. Check compressor vacuum is reading between 450 and 500mmhg

C. Check Pressures and vacuums as per OM section 9 (2.0kg/.6kg/.5kg/250mmhg) and adjust as needed.

13. Check auto and manual rinse cup pinch valve tubing, and adjust/replace as needed.

14. Run a rack of samples in auto mode and check for correct operation and alignment of piercer

15. WBC verification

Analyse latex checking the following parameters are within shown limits

Parameter	Target OLD	NEW
WBC/BASO X(W)	<18	< 15
WBC/BASO Y(W)	<29	< 20
DIFF Y (W)	<54	< 35

WBC/BASO -X = 170 ±10

16. Check HGB blank value is 20 +/- 1.0

17. Run normal level Q.C. (SF check) in manual mode and verify parameters are running to specification

Note that if WBC sensitivity requires adjusting perform as shown in the order below.

First:-

Channel	Parameter	Adjustment on PCB 2119
WBC/BASO Y AXIS	WBC/BA Y MFV	VR7
DIFF X AXIS	GRN X MFV	VR8

Then:-

Channel	Parameter	Adjustment on PCB 2119
WBC/BASO X AXIS	WBC/BA X MFV	VR6
DIFF Y AXIS	GRN Y MFV	VR5

18. Run remaining controls in manual mode and verify results are within specification

19. Run all levels of control in auto mode and check results are within specification

20. Perform an auto rinse and check that no background error appears.

Set on normal and then check high & low

WBC Flow Cell Cleaning procedure (using manual syringe)

1. Cleaning Flow Cell

① Disconnect tubing connected to fluid connector 14-1(1). Aspirate approx. 5 mL of CELLCLEAN into a syringe.

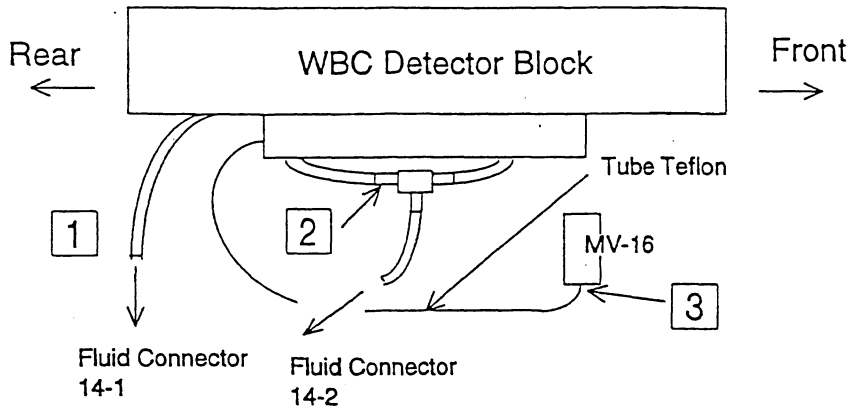


Figure 1 Removing Tubing

② Disconnect tubing connected to T Joint (2). Place tissue, gauze, or disposable cup under this tubing to receive liquid spill. Connect the syringe which is aspirated CELLCLEAN to the tubing(1). Clean the Flow Cell by pushing and pulling the syringe approx. 10 times.

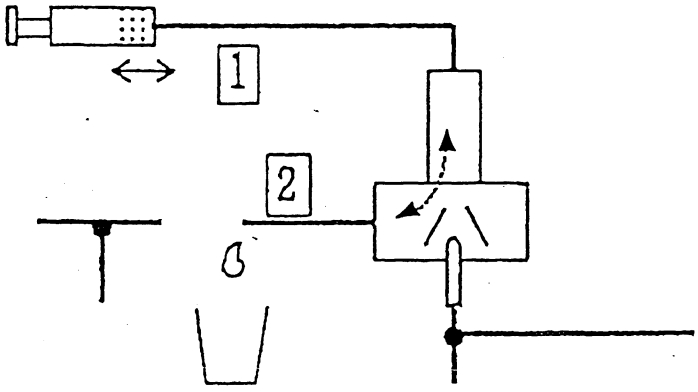


Figure 2 Cleaning Flow Cell by Pushing and Pulling the Syringe

③ Reconnect tubings to Fluid connector 14-1 and T Joint.

2. Cleaning Nozzle

① Disconnect tubing connected to Master Valve MV-16 (3). Aspirate approx. 5 mL of CELLCLEAN into a syringe (Figure 1).

② Disconnect tubing connected to T Joint (2). Place tissue, gauze, or disposable cup under this tubing to receive liquid spill. Connect the syringe which is aspirated CELLCLEAN to the tubing (3). Clean the Nozzle by pushing and pulling the syringe approx. 10 times.

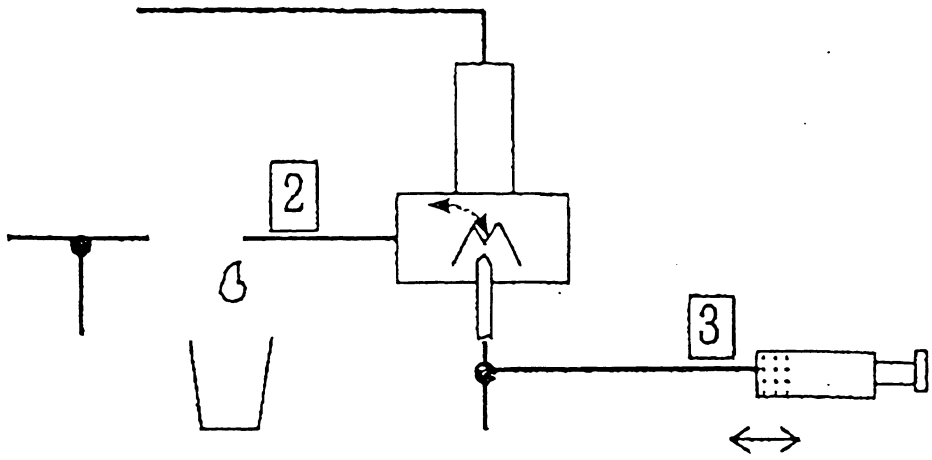


Figure 3 Cleaning Nozzle by Pushing and Pulling the Syringe

③ Reconnect tubings to Master Vale MV-16 and T Joint.

3. Background Check
① Perform Auto Rinse repeatedly until sum of sampling data of WBC/BASO and DIFF are below 100.